



Patent
Attorney's Docket No. 011495-056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
)
Kevin Lauren COTE, *et al.*) Group Art Unit: 3724
)
Application No.: 09/505,887) Examiner: C. Dexter
)
Filed: February 17, 2000) Confirmation No. 7040
)
For: METHOD AND APPARATUS FOR)
PROVIDING POSITIVE CONTROL)
OF A PRINTABLE MEDIUM IN A)
PRINTING SYSTEM)

#20 / Appeal
12/10/03
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BRIEF FOR APPELLANT

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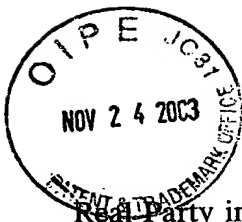
This appeal is from the decision of the Primary Examiner dated May 20, 2003 (Paper No.), finally rejecting claims 20-23 and 27, which are reproduced as an Appendix to this brief.

Payment covering the [] \$160.00 (2402) [X] \$320.00 (1402) Government fee and two extra copies of this brief are being filed herewith.

The Director is hereby authorized to charge the \$320.00 (1402) Government fee, and to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. A copy of this page and the signature page are submitted in duplicate.

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Brief for Appellant
Application No. 09/505,887
Attorney's Docket No. 011495-056

I. Real Party in Interest

The present application is assigned to Heidelberger Druckmaschinen AG.

II. Related Appeals and Interferences

The Appellants' legal representative, or assignee does not know of any other appeal or interferences which will affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 20-27 are pending in the application. Claims 24-26 are withdrawn from consideration and claims 20-23 and 27 are rejected.

IV. Status of Amendments

No amendments were filed subsequent to the Final Office Action mailed May 2003.

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V. Summary of the Invention

Exemplary embodiments of the present invention are directed to a carrier system for providing positive control over a printable medium processed by a printing system, to prevent damage to the printable medium. The exemplary Figure 1 embodiment illustrates a carrier system 100 associated with a printable medium 104. A carrier system 100 includes a first roller chain carrier assembly 120 for contacting the printable medium from one side, and a second roller chain carrier assembly 122 for contacting the printable medium from an opposite side. The first and second roller chain carrier assemblies work in synchronism to positively control a transport of the medium 104 from an area of constraint upstream of a cutting cylinder pair 102, through the cutting cylinder pair. The first and second roller chain carrier assemblies maintain positive control over signatures as they are transported to a downstream area of constraint.

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The first roller chain carrier assembly includes a first looped drive chain 124 and a second looped drive chain 130. The second roller chain carrier assembly 122 also includes a first looped drive chain 138 and a second looped drive chain 142. The first and second roller chain carrier assemblies 120 and 122 contact the medium via cross bars associated with each of the first and second roller chain carrier assemblies. For example, the first roller chain carrier assembly includes gripper cross bars 152 through 164, while the second roller chain carrier assembly 122 includes roller cross bars 166 through 174. Each gripper cross bar includes a plurality of grippers 176 mounted on a support bar 178. Roller cross bars, such as roller cross bar 166, each include a roller 180 supported on a support bar 182. The gripper cross bars of the first roller chain carrier assembly 120 rotate in synchronism with the roller cross bars of the second roller chain carrier assembly, such that a gripper cross bar (e.g., gripper cross bar 152) contacts the printable medium from one side, while a corresponding roller cross bar (e.g., roller cross bar 180) contacts the medium from the other side.

Figures 2-3 show exemplary slots (e.g., 202) for receiving the grippers (e.g., 310, 312, 314) during synchronous rotation as shown in Figure 3.

The foregoing features are broadly encompassed by Applicants' claim 20 combination which is directed to a carrier system for establishing positive control over a printable medium processed by a printing system. The claim 20 carrier system includes a first roller chain carrier assembly and a second roller chain carrier assembly. At least one rotatably mounted gripper cross bar is in operative connection with the first roller chain assembly, and a rotatably mounted roller cross bar is in operative connection with the second roller chain carrier assembly. At least one rotatably mounted gripper cross bar and at least one rotatably mounted roller cross bar cooperate along a transport path of the printable medium.

VI. The Issues

The issues on appeal are:

- (1) whether claims 20-23 and 27 are anticipated under 35 U.S.C. §102(b) over U.S. Patent No. 3,623,386 to Bach, *et al* (Bach); and
- (2) whether claims 20-23 and 27 would have been obvious under 35 U.S.C. §103(a) over U.S. Patent No. 3,623,386 to Bach, *et al* (Bach).

VII. Grouping of Claims

Claims 20-22 and 27 stand or fall together. Claim 23 stands alone.

VIII. Argument

In numbered paragraph 5 on page 3 of the Office Action, claims 20-23 and 27 are rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 3,623,386 (Bach et al). This rejection is respectfully traversed, as the Bach patent fails to teach or suggest the combination of features set forth in Applicants' claim 20.

Applicants' claim 20 combination which is directed to a carrier system for establishing positive control over a printable medium processed by a printing system. The claim 20 carrier system includes a first roller chain carrier assembly and a second roller chain carrier assembly. At least one rotatably mounted gripper cross bar is in operative connection with the first roller chain assembly, and a rotatably mounted roller cross bar is in operative connection with the second roller chain carrier assembly. At least one rotatably mounted gripper cross bar and at least one rotatably mounted roller cross bar cooperate along a transport path of the printable medium.

These features are neither taught nor suggested by the Bach patent, which is directed to the manufacture of tabulating cards. Figure 1 of the Bach patent illustrates clips 11 carried by and spaced equal distances along an endless driven belt 12. Each clip 11 is

spring-biased to a closed position in which the leading edge of each card is pinched between a wedge-shaped tip 11a and the belt 12. Another belt 20 is parallel to the vertical run of the belt 12 such that tips 11a and cards 10 projecting therefrom are positioned adjacent a plurality of tool units 23 carried by belt 20. As described at column 4, lines 46 et seq., work operations, such as cutting beveled corners on trailing edges of a card 10, can be performed by releasing flat articles from clips 11 on one belt 12 to a respective one of the plural tool units 23 carried by the belt 20.

However, the Bach patent fails to teach or suggest any use of a rotatably mounted gripper cross bar or a rotatably mounted roller cross bar as recited in Applicants' claim 20 combination. There is no teaching or suggestion in the Bach patent of providing plural parallel clips 11 (i.e., parallel in a direction into the plane of Fig. 1), and as such, there would not have been any motivation to provide rotatably mounted gripper or roller cross bars as presently claimed. Figure 1 of the Bach patent does not show a top view of the clips 11, and the specification makes no mention that any parallel arrangement of clips 11 mounted on a rotatable gripper cross bar is provided in the Figure 1 arrangement. Figure 2 of the Bach patent shows a bottom view of the tool units 23 arranged in series, and illustrates that there is no parallel arrangement of tool clips on any rotatably mounted roller cross bar in a direction into the plane of Figure 1. As such, this patent teaches away from use of rotatably mounted gripper and/or roller cross bars.

A more detailed illustration of the Figure 1 tool units 23 of the Bach patent is illustrated in Figure 2 wherein it can be seen that a cam follower 36 is rotatably mounted on the shaft 37. However, there is no description that shaft 37 itself rotates (see discussion of the operation of shaft 37 at column 3, lines 35-40). As such, shaft 37 cannot be considered a rotatably mounted roller cross bar as recited in claim 20.

In addition, while it is noted that the clips 11 include some ability to rotate at least a portion thereof about a shaft to create closed and opened positions, there is no teaching or suggestion that any rotatable crossbar is associated with each clip 11. As such, there is no teaching or suggestion of a rotatably mounted cross bar as recited in claim 20.

In light of the foregoing comments, it is respectfully requested that claim 20 is allowable over the Bach patent whether this document is considered alone, or in combination with the unsubstantiated assertion of "official notice" taken by the Examiner in the Office Action. Claim 20 is therefore considered allowable. The remaining claims 21-23 and 27 depend from claim 20 and recite additional advantageous features which further distinguish. Similarly, non-elected claims 24-26 depend from claim 20 and recite additional advantageous features which are also considered allowable.

With respect to Claim 23, Applicants note that Bach fails to disclose or suggest at least one roller crossbar including at least one slot for receiving said spring-like gripper finger during rotation of said at least one gripping device in synchronism with rotation of said at least one roller crossbar, as recited in Claim 23. The Examiner asserts Official Notice of this feature on grounds that slots are well known in the art to accommodate close spacing. However, Bach does not require, disclose or suggest such slots, and the Examiner fails to present any motivation that would have caused a person of ordinary skill in the art at the time of the present invention, to modify Bach to include such slots. Accordingly, the Examiner's reasoning with respect to Claim 23 appears to rely on improper hindsight recognition.

For at least the foregoing reasons, Applicants respectfully request that the rejection of claims 20-23 and 27 under 35 U.S.C. §102(b) and 35 U.S.C. § 103(a) over Bach be reversed.

IX. Conclusion

For at least the foregoing reasons, Applicants respectfully request that the Examiner's rejections of claims 20-23 and 27 under 35 U.S.C. §102(b) over U.S. Patent No. 3,623,386 to Bach, *et al* (Bach) and under 35 U.S.C. §103(a) over U.S. Patent No. 3,623,386 to Bach, *et al* (Bach) be REVERSED.

Respectfully submitted,

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APPENDIX A

The Appealed Claims

20. A carrier system for establishing positive control of a printable medium processed by a printing system, the carrier system comprising:

at least a first roller chain carrier assembly located on the first side of a transport path of a printable medium;

at least a second roller chain carrier assembly located on a second side of the transport path;

at least one rotatably mounted gripper crossbar in operative connection with the at least first roller chain assembly; and

at least one rotatably mounted roller crossbar in operative connection with said at least one second roller chain carrier assembly,

wherein the at least one rotatably mounted gripper crossbar and the at least one rotatably mounted roller crossbar cooperate along the transport path.

21. A carrier system according to claim 20, wherein said at least one gripper crossbar further includes:

at least one device for gripping an edge of said printable medium.

22. An apparatus according to claim 21, wherein said at least one gripping device further includes:

a spring-like gripper finger for grasping said edge of said printable medium.

23. A carrier system according to claim 22, wherein said at least one roller crossbar further includes:

at least one slot for receiving said spring-like gripper finger during rotation of said at least one gripping device in synchronism with rotation of said at least one roller crossbar.

24. A carrier system according to claim 20, further including:
a cam device for rotating said at least one gripper crossbar and said at least one roller crossbar relative to said printable medium, said cam device further including:
a first section for rotating said gripper crossbar and said roller crossbar in a first direction;
a second section for retaining said gripper crossbar and said roller crossbar in a fixed rotational state; and
a third section for rotating said gripper crossbar and said roller crossbar in a second direction, opposite said first direction.

25. The carrier system of claim 20, wherein the at least one gripper crossbar and the at least one roller crossbar are driven at a speed greater than that with which the printable medium is transported along the transport path.

26. The carrier system of claim 24, wherein when the gripper crossbar and the roller crossbar rotate in the first direction, they rotate across surfaces of the ribbon in a transport direction of the printable medium along the transport path.

27. The carrier system of claim 21, wherein the edge is a severed edge transverse to the transport path.